

The State of New Hampshire

Department of Environmental Services



Michael P. Nolin Commissioner

Mrs. Martha Foster Stoddard Main Company 633 Elm Street Milford, NH 03055 February 1, 2006 **Letter of Deficiency** DSP#06-004

RE: Robb Reservoir Dam #223.02, Stoddard

Dear Mrs. Foster:

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 302.02, an inspection of the subject dam was conducted on October 11, 2005. This inspection/site review was conducted to verify the condition of the dam as a result of the October 2005 storm events. Additionally, a status review of deficiencies as indicated in a Letter of Deficiency (LOD) dated January 28, 2004. Enclosed is a copy for your reference. The following is the current status as the result of our emergency inspection as well as the status of the 2004 LOD.

- 1. Submit, in writing, a design that indicates when the failure of the flashboards will occur if they have not been constructed as was designed in the 1951 State of New Hampshire, Fish and Game Plan. It appears that the flashboards were not designed to operate as traditional flashboards. The dam was overtopped during the early October 2005 storm event near the stoplog bay and at the right earth abutment with the boards remaining in place. No design was submitted to DES for review for the boards in their current configuration. In addition an application to reconstruct the dam is required per RSA482:2, VIII due to the change in discharge capacity of a dam;
- 2. Remove the brush and tree growth in the following locations:
 - a. Along the upstream right earth embankment (brush);
 - b. Along the entire right downstream face of the dam (brush & tree);
 - c. Within 15 feet of the toe of the right downstream right earth embankment (brush & tree);
 - d. Within 15 feet of the left concrete abutment (tree);

This appears to not have been conducted. If removal did in fact take place as indicated above, significant re-growth has occurred.

- 3. Remove the previous brush and tree removal debris from the embankment and maintain a hardy erosion resistant cover on the entire earth embankment. This was not observed at the time of the October 11, 2005 site visit;
- 4. Monitor and repair as necessary the concrete cracking at the left end of the concrete walkway above the left concrete stoplog pier/abutment. Also, update and reference an inspection schedule in the attached operational plan. It is unclear if the monitoring of the concrete is being conducted. No repairs were observed and resubmission of the operational plan was not completed as requested;

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- 5. Monitor and repair, as necessary, the crack in the concrete near the water line in the left concrete stoplog pier/abutment. Also, update and reference an inspection schedule in the attached operational plan. It is unclear if this is being conducted as the operational plan was not updated and resubmitted;
- 6. Monitor the standing water that was observed at the toe of the right embankment adjacent to the outflow channel. Additionally, at the next significant storm event observe the condition at the toe of the right earth embankment and report to our office, in writing, as to whether the outflow channel backwater exits in this area. **This was not reported as requested**.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

April 1, 2006:

- 1. Submit, in writing, a design for flashboards, which will operate when there is at least one foot of freeboard at the dam. The design is to be implemented by October 1, 2006;
- 2. Report on any monitoring activity that may have occurred relative to items 5 through 7 below;

September 1, 2006:

- 3. Remove the brush and tree growth in the following locations:
 - a. Along the upstream right earth embankment (brush);
 - b. Along the entire right downstream face of the dam (brush & tree);
 - c. Within 15 feet of the toe of the right downstream right earth embankment (brush & tree);
 - d. Within 15 feet of the left concrete abutment (tree);
- 4. Remove the previous brush and tree removal debris from the embankment and maintain a hardy erosion resistant cover on the entire earth embankment;

On a Continuous Basis:

- 5. Monitor and repair as necessary the concrete cracking at the left end of the concrete walkway above the left concrete stoplog pier/abutment. Also, update and reference an inspection schedule in the attached operational plan by April 1, 2006;
- 6. Monitor and repair, as necessary, the crack in the concrete near the water line in the left concrete stoplog pier/abutment. Also, update and reference an inspection schedule in the attached operational plan by April 1, 2006; and
- 7. Monitor the standing water that was observed at the toe of the right embankment adjacent to the outflow channel. Additionally, at the next significant storm event observe the condition at the toe of the right earth embankment and report to our office, in writing, as to whether the outflow channel backwater exits in this area.

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DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. We have enclosed a self addressed stamped envelope for you to return this form. Due to the percentage of non compliance as illustrated above DES is strongly recommending that you address these outstanding issues. If compliance is not achieved in the outlined schedule DES will be forced to proceed with legal action which could result in fines.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the bottom of the cover page.

Sincerely,

Dale F. Guinn, P.E. Dam Safety Engineer